The limits of technology

Far from a panacea, IT is merely a tool for solving problems

A new study in the *American Journal of Managed Care* dashes hopes that hot-ticket information technologies such as computerized physician order entry will revolutionize everyday clinical care. The report, by Ted Palen of Colorado Permanente Medical Group in Denver and colleagues, finds that CPOE did not improve physician compliance with laboratory monitoring alert recommendations in a group-model, managed-care organization.

So it appears that the technology many of us had hoped would reduce medical errors and help improve care in other ways is at best immature and perhaps deeply flawed. Palen's study is not the first to suggest shortcomings in CPOE: A 2005 investigation by Ross Koppel of the Center for Clinical Epidemiology and Biostatistics at the University of Pennsylvania School of Medicine identified 22 situations in which a CPOE system increased the probability of medication errors, mainly due to issues of data fragmentation and interface problems between humans and machines.

Well, here's news for the high-tech mavens: No technology is perfect. And no technology—not even one that promises instantaneous access to the latest evidence-based care recommendations at the point of care—will cure our healthcare system of its ailments.

But technology can help substantially, if we accord it proper status. It's no panacea, but rather a tool for solving problems. It's not more important than patients or residents, and it's always subservient to the needs of its users.

Many experts argue that the key to success with IT is proper implementation. I disagree. I believe that success with IT is all about pre-implementation—even preplanning.

What does that mean?

It means eschewing turnkey solutions to your problems from off-the-shelf software programs and outside consultants who know exactly what to do before they've even set foot inside your facility.

It means ensuring the technology you've selected addresses the needs of your healthcare organization, starting with the day-to-day work problems of all your care staff and ending with the effect of care on patients.

It means, first and foremost, talking to your clinical-care staff, engaging them in IT decisionmaking and listening to them because they know better than anyone what makes their jobs difficult and what could be done to make them easier and more effective.

Foremost, engage your clinical staff in IT decisionmaking. And listen to them.

Sounds simplistic? Consider this: A project for which I'm the principal investigator assisted 11 nursing homes across the country in planning and adopting various information technologies. In a year, the incidence of pressure sores among residents at these facilities fell 33%. That project, funded by the Agency for Healthcare Research and Quality, served as a jumping-off point for work we are doing with approximately 40 facilities that want to achieve similar success.

There was no magic-bullet technology. Some facilities implemented digital pen systems, some customized existing health IT products and others designed their own electronic health-record systems. All included real-time clinical reporting and feedback.

Our research team helped the participating facilities bring the right people to the table and ask the right questions about workflow, job stress, documentation requirements and other issues directly related to resident care. The focus was on process: What does it take to provide consistently high-quality, patient-centered care? What are the key pieces of information that make a difference?

Our discussions brought together everyone who had a hand in resident care: the certified nursing assistants, dietitians, nursing coordinators and managers. Together, they laid out what they needed. We did not impose a preconceived solution on them for the sake of bringing in a state-of-the-art technology.

Across the board, the results have been amazing. Nurse assistants say they feel a greater sense of ownership and empowerment. Nurses report improvements in team communication and documentation. The process of focusing on how to improve care has both strengthened morale and produced tangible improvements in resident care.

For example, I and the staff at the Christian Home and Rehabilitation Center in Waupun, Wis., came up with a way to standardize charting and produce real-time reports that tell staff how well a resident eats at certain times of the day, to monitor incontinence and toileting patterns, and to show which residents might benefit from evening activities. Staff members can look at what's happened to a particular resident over the course of an entire week and make care decisions based on that person's immediate and comprehensive needs.

These real-time reports can also help staff provide care that is more cost-effective. For example, not all residents with incontinence problems need heavy urinary pads; they may be more comfortable with lighter products. In one case, staffers at Christian Home detected a urinary tract infection in a resident sooner than they would have without the reporting system. Early detection resulted in less discomfort for the patient as well as reduced cost because less intensive treatment was needed, and it prevented a potential pressure ulcer.

When IT is used as an engine to keep progress moving, it can be truly powerful. But the real work starts long before you push the start button. The real work is building a dedicated, empowered and involved care team that can use all manner of IT-related tools to solve important problems and provide more effective, more patient-centered care. «

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